



SECTION 04 21 00
CLAY UNIT MASONRY

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Clay masonry units and accessories including:
 - 1. Brick units.
 - 2. Anchors and ties.
 - 3. Expansion joints.
 - 4. Flashing.
 - 5. Reinforcement.
 - 6. Mortar.
 - 7. Cleaning.

1.2 PRODUCTS INSTALLED BUT NOT FURNISHED UNDER THIS SECTION

- A. Section 03 30 00 - Cast-in-Place Concrete.
- B. Section 04 20 00 - Unit Masonry.
- C. Section 05 50 00 - Metal Fabrications.
- D. Section 07 25 00 - WeatherBarriers.
- E. Section 07 60 00 - Flashing and Sheet Metal.

1.3 RELATED SECTIONS

- A. Section 03 30 00 - Cast-in-Place Concrete.
- B. Section 03 45 13 - Faced Architectural Precast Concrete.
- C. Section 04 20 00 - Unit Masonry.
- D. Section 05 12 13 - Architecturally-Exposed Structural Steel Framing.
- E. Section 05 40 00 - Cold-Formed Metal Framing.
- F. Section 05 50 00 - Metal Fabrications.
- G. Section 06 10 00 - Rough Carpentry.
- H. Section 07 10 00 - Dampproofing and Waterproofing.
- I. Section 07 25 00 - WeatherBarriers.

1.4 REFERENCES

- A. ASTM International (ASTM):
 1. ASTM A 36 - Standard Specification for Carbon Structural Steel.
 2. ASTM A 82 - Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
 3. ASTM A 153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 4. ASTM A 615 - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
 5. ASTM A 616 - Standard Specification for Rail-Steel Deformed and Plain Bars for Concrete Reinforcement.
 6. ASTM A 617 - Standard Specification for Axle-Steel Deformed and Plain Bars for Concrete Reinforcement.
 7. ASTM A 666 - Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
 8. ASTM A 775 - Standard Specification for Epoxy-Coated Steel Reinforcing Bars.
 9. ASTM A996 - Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement.
 10. ASTM B 370 - Standard Specification for Copper Sheet and Strip for Building Construction.
 11. ASTM C 67 - Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.
 12. ASTM C 216 - Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale).
 13. ASTM C 270 - Standard Specification for Mortar for Unit Masonry.
 14. ASTM C 652 - Standard Specification for Hollow Brick (Hollow Masonry Units Made From Clay or Shale).
 15. ASTM C 1088 - Standard Specification for Thin Veneer Brick Units Made from Clay or Shale.
 16. ASTM D 1056 - Standard Specification for Flexible Cellular Materials - Sponge or Expanded Rubber.

- B. Manufacturer's Reference Standards, on Website:
 1. IRA, Mortar, and Workmanship.
 2. General Maintenance of Brick Masonry.
 3. Basic Guide to Installing Molded Brick.
 4. Cleaning Guide for All Glen-Gery Brick Types.
 5. Cleaning Molded and Sand Finished Brick.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01 30 00.

- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 1. Preparation instructions and recommendations.
 2. Storage and handling requirements and recommendations.
 3. Installation methods.

- C. Samples: Furnish not less than five individual brick as samples, showing extreme variations in color and texture.

- D. Sample Panel: Mock-up or sample panels shall be used to review brick and mortar color and serve as the standard of workmanship for the Project.
 1. Approximately 4 feet (1.2 m) long by 3 feet (1 m) high, showing the proposed color range, texture, bond, mortar and workmanship. All brick shipped for the sample shall be included in the panel.

2. When required, provide a separate panel for each type of brick or mortar.
3. Do not start work until Architect/Engineer has accepted sample panel.
4. Use panel as standard of comparison for all masonry work built of same material.
5. Do not destroy or move panel until work is completed and accepted by Architect.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years manufacturing similar products.
- B. Installer Qualifications: Minimum 2 years installing similar products.
- C. Brick Tests: Sample and test shall be in accordance with ASTM C 67.
- D. Test Reports:
 1. Testing and reports shall be completed by an independent laboratory.
 2. Test reports for each type of building and facing brick shall be submitted to the Architect/Engineer for review.
 3. Test reports shall indicate:
 - a. Compressive strength.
 - b. 24 hour cold water absorption.
 - c. 5-hour boil absorption.
 - d. Saturation coefficient.
 - e. Initial rate of absorption.
 - f. Efflorescence.
- E. Certificates: Prior to delivery, submit to Architect/Engineer certificates attesting compliance with the applicable specifications for grades, types or classes included in these specifications.
- F. Costs of Tests: Cost of tests shall be borne by the purchaser, unless tests indicate that units do not conform to the requirements of the specifications, in which case cost shall be borne by the seller.
- G. Prism Tests: Prism Tests shall be required when using engineered masonry (f 'm = _____ psi).

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store brick off the ground to prevent contamination by mud, dust or other materials likely to cause staining or other defects.
- C. Cover all materials with a nonstaining waterproof membrane material when necessary to protect from elements.
- D. Store different types of materials separately.

1.8 ALLOWANCES

- A. Allowance includes purchase of brick, taxes, delivery and any special handling charges.
- B. Special shaped brick units shall have a separate allowance.

1.9 PROJECT CONDITIONS

- A. Protection of Work:
 1. Wall Covering:

- a. During erection, cover top of wall with strong nonstaining waterproof membrane at end of each day or shutdown.
 - b. Cover partially completed walls when work is not in progress.
 - c. Extend cover minimum of 24 inches (610 mm) down both sides.
 - d. Hold cover securely in place.
2. Load Applications:
- a. Do not apply uniform floor or roof loading for at least 12 hours after building masonry columns or wall.
 - b. Do not apply concentrated loads for at least 3 days after building masonry columns or walls.
3. Stain Prevention:
- a. Prevent grout or mortar from staining the face of masonry.
 - b. Remove immediately grout or mortar in contact with face of such masonry.
 - c. Protect all sills, ledges and projections from droppings of mortar.
 - d. Protect base of wall from rain-splashed mud and mortar splatter.
 - e. Scaffold boards shall be turned on edge when work is not in progress.
- B. Cold Weather Protection:
1. Preparation:
- a. When ice or snow has formed on masonry bed, remove by carefully applying heat not to exceed 120 degrees F (49 degrees C) until surface is dry to the touch.
 - b. Remove all masonry deemed frozen or damaged.
2. Products:
- a. When brick suction exceeds BIA reference standard, sprinkle with heated water:
 - 1) When units are above 32 degrees F (0 degrees C), heat water above 70 degrees F (21 degrees C).
 - 2) When units are below 32 degrees F (0 degrees C), heat water above 130 degrees F (54 degrees C).
 - b. Use dry masonry units.
 - c. Do not use wet or frozen units.
3. Construction Requirements While Work is Progressing:
- a. Air temperature 40 degrees F (4 degrees C) to 32 degrees F (0 degrees C):
 - 1) Heat sand or mixing water to produce mortar temperatures between 40 degrees F (4 degrees C) to 32 degrees F (0 degrees C).
 - b. Air temperature 32 degrees F (0 degrees C) to 25 degrees F (-4 degrees C):
 - 1) Heat sand and mixing water to produce temperatures between 40 degrees F (4 degrees C) and 120 degrees F (49 degrees C).
 - 2) Maintain temperature of mortar on boards above freezing.
 - c. Air temperatures 25 degrees F (-4 degrees C) to 20 degrees F (-7 degrees C).
 - 1) Heat sand and mixing water to produce mortar temperatures between 40 degrees F (4 degrees C) and 120 degrees F. (49 degrees C).
 - 2) Maintain mortar temperatures on boards above freezing.
 - 3) Use salamanders or other heat sources on both sides of walls under construction.
 - 4) Use windbreaks when wind is in excess of 15 mph (24 kms/h).
 - d. Air temperature 20 degrees F (-7 degrees C) and below:
 - 1) Heat sand and mixing water to produce mortar temperatures between 40 degrees F (4 degrees C) and 120 degrees F (49 degrees C.).
 - 2) Provide enclosures and auxiliary heat to maintain air temperature above 32 degrees F (0 degrees C).
 - 3) Minimum temperature of units when laid: 20 degrees F (-7 degrees C).
4. Protection requirements for completed masonry and masonry not being worked on:
- a. Mean daily air temperature 40 degrees F (4 degrees C) to 32 degrees F (0 degrees C):

- 1) Protect masonry from rain or snow for 24 hours by covering with weather-resistive membrane.
 - b. Mean daily air temperature 32 degrees F (0 degrees C) to 25 degrees F (-4 degrees C):
 - 1) Completely cover masonry with weather-resistive membrane for 24 hrs.
 - c. Mean daily temperature 25 degrees F (-4 degrees C) to 20 degrees F (-7 degrees C):
 - 1) Completely cover masonry with insulating blankets or equal protection for 24 hours.
 - d. Mean daily air temperature 20 degrees F (-7 degrees C) and below:
 - 1) Maintain masonry temperature above 32 degrees F (0 degrees C) for 24 hours by:
 - a) Method: Enclosure and supplementary heat.
 - b) Method: Electric heating blankets.
 - c) Method: Infrared lamps.
 - d) Method: Other approved methods.
- C. Hot Weather Protection:
1. When temperature exceeds 100 degrees F or 90 degrees F with 8 mph wind (above 38 degrees C or 32 degrees C with 13 kms/h wind).
 - a. Maintain temperature of mortar and grout between 70 degrees F and 120 degrees F (21 degrees C and 49 degrees C).
 - 1) Limit spread of mortar bed to 4 feet (1.2 m). Place units within 1 minute of spreading mortar.
 - b. Partially or recently completed walls may be fog sprayed and/or covered with opaque plastic or canvas or both to control moisture evaporation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Glen-Gery Corporation, which is located at: 1166 Spring St.; Wyomissing, PA 19610; Tel: 610-374-4011; Email:[request info \(info@glengery.com\)](mailto:info@glengery.com); Web:<https://www.glengery.com>
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 CLAY MASONRY UNITS

- A. All brick specified and shown on drawing shall be _____ as Manufactured by Glen-Gery.
 1. Facing Brick: ASTM C 216, Grade SW,
 - a. Type FBS.
 - b. Type FBX.
 - c. Type FBA.
 - d. Size: _____ by _____ by _____ (t by h by l)
 2. Hollow Brick: ASTM C 652, Grade SW.
 - a. Type HBS.
 - b. Type HBX.
 - c. Type HBA.
 - d. Size: _____ by _____ by _____ (t by h by l)
 3. Thin Veneer Brick: ASTM C 1088.
 - a. Grade Exterior.
 - b. Grade Interior.

- c. Type TBS.
 - d. Type TBX.
 - e. Type TBA.
 - f. Size: _____ by _____ by _____ (t by h by l).
- B. Minimum Compressive Strength: _____. (Not applicable to Thin Brick conforming with ASTM C1088.)
 - C. Provide brick similar in texture, color and physical properties to those available for inspection at the Architect/Engineer's office and/or as supplied on the approved sample panel.
 - D. Shapes: Special shapes are required to be used per architectural detail(s).
 - E. Blend: Unpackage brick from several pallets at the same time. Blend by taking brick from several rows within each package at the same time, in order to maintain intended color range.

2.3 REINFORCEMENT

- A. Masonry Joint Reinforcement, General: ASTM A 961
 - 1. Interior Walls: Hot Dip galvanized, ASTM A 153 (1.50 ounces per square foot), carbon steel.
 - 2. Exterior Walls: Hot-dip galvanized, ASTM A 153 Class B-2 (1.50 ounces per square foot) carbon steel.
 - 3. Interior Walls Exposed to High Humidity: Hot dip galvanized, ASTM A 153 Class B-2 (1.50 ounces per square foot) carbon steel).
 - 4. Wire Size and Side Rods: W1.7 or 0.148 inch diameter (9 gauge).
 - 5. Wire Size and Cross Rods: W1.7 or 0.148 inch diameter (9 gauge).
 - 6. Wire Size for Veneer Ties: W2.8 or 0.1875 inch diameter (3/16 inch).
 - 7. Spacing for Cross Rods: 16 inches on center
 - 8. Provide in lengths of 10 feet.
- B. Masonry Joint Reinforcement for Single-Wythe Masonry: Ladder type with single pair of side rods.
- C. Masonry Joint Reinforcement for Multi-Wythe Masonry: Ladder type with adjustable (two-piece) design, with separate double adjustable ties with pintle-and-eye connections welded to side rod 16 inches on center. Double hook ties that engage eyes welded to reinforcement and resist movement perpendicular to wall. Hook tie length shall be sufficient to extend 1/2 inch minimum into outer face shell for hollow units and 1-1/2 inch minimum into solid units, but with a minimum 5/8 inch cover at outside face

2.4 ANCHORS AND TIES

- A. Partition Top Anchors: 0.105-inch- (2.66-mm-) thick metal plate with a 3/8-inch- (9.5-mm-) diameter metal rod 6 inches (152 mm) long welded to plate and with closed-end plastic tube fitted over rod that allows rod to move in and out of tube. Fabricate from hot-dip galvanized
 - 1. Basis-of-Design Product: subject to compliance with requirements, provide Hohmann & Barnard; PTA #420 or a comparable product.
- B. Rigid Anchors: Fabricate from steel bars 1-1/2 inches (38 mm) wide by 1/4 inch (6.35 mm) thick by 24 inches (610 mm) long, with ends turned up 2 inches (51 mm)
 - 1. Basis-of-Design Product: subject to compliance with requirements, provide Hohmann & Barnard; #344 Rigid Partition Anchor or a comparable product.
- C. Adjustable Anchors for Connecting to Structural Steel Framing: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to

plane of wall.

1. Anchor Section for Welding to Steel Frame: Crimped 1/4-inch- (6.35-mm-) diameter, hot-dip galvanized-steel wire.
 2. Tie Section: Triangular-shaped wire tie made from 0.187-inch- (4.76-mm) diameter, hot-dip galvanized-steel wire.
- D. Adjustable Anchors for Connecting to Concrete: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.
1. Connector Section: Dovetail tabs for inserting into dovetail slots in concrete and attached to tie section; formed 0.105-inch- (2.66-mm-) thick steel sheet, galvanized after fabrication.
 2. Tie Section: Triangular-shaped wire tie made from 0.187-inch- (4.76-mm-) diameter, hot-dip galvanized-steel wire.
- E. Adjustable Masonry-Veneer Anchors:
1. General: Provide anchors that allow vertical adjustment but resist a 100-lbf (445N) load in both tension and compression perpendicular to plane of wall without deforming or developing play in excess of 1/16 inch (1.5 mm).
 2. Fabricate sheet metal anchor sections and other sheet metal parts from 0.075inch- (1.90-mm-) thick steel sheet, galvanized after fabrication.
 3. Fabricate wire ties from 0.187-inch- (4.76-mm-) diameter; hot-dip galvanized steel wire unless otherwise indicated.
 4. Contractor's Option: Unless otherwise indicated, provide any of the adjustable masonry-veneer anchors specified. Option (a) is recommended with use of XPS Insulation and Polyiso Insulation. Option (b) is recommended with use of Mineral Wool Insulation and Spray Foam Insulation.
 - a. Masonry-Veneer Anchors: Wire tie and corrosion-resistant, self-drilling, eye-screw designed to receive wire tie. Eye-screw has spacer that seats directly against framing and is same thickness as sheathing and has gasketed washer head that seals hole in sheathing and continuous insulation. Anchor to be installed after insulation installation.
 - 1) Basis-of-Design Product: subject to compliance with requirements, provide Hohmann & Barnard; 2-Seal Anchoring System or a comparable product by one of the following manufacturers, but not limited to
 - a) Wire-Bond
 - b) Heckmann Building Products
 - b. Screw-Attached, Masonry-Veneer Anchors: Wire tie and a rib-stiffened, sheet metal anchor section with screw holes top and bottom. Anchor to be installed before insulation installation.
 - 1) Basis-of-Design Product: subject to compliance with requirements, provide Hohmann & Barnard; HB-213 Anchor or a comparable product by one of the following manufacturers, but not limited to
 - a) Wire-Bond
 - b) Heckmann Building Products

2.5 FLASHING

- A. Metal Flashing: Provide metal flashing complying with Section 076200 "Sheet Metal Flashing and Trim" and as follows:
1. Fabricate metal drip edges from stainless steel. Extend at least 3 inches (76 mm) into wall and 1/4 inch (6.5 mm) out from wall, with outer edge bent down 30 degrees and hemmed.
 2. Fabricate metal sealant stops from stainless steel. Extend at least 3 inches (76 mm) into wall and out to exterior face of wall. At exterior face of wall, bend metal back on itself for 3/4 inch (19 mm) and down into joint 1/4 inch (6 mm) to form a stop for retaining sealant backer rod.
- B. Flexible Flashing: Use one of the following unless otherwise indicated:
1. Flexible Stainless Steel Flashing: Stainless steel core with polymer fabric laminated to the bottom stainless steel face with non-asphalt adhesive. The top face (exposed side) must not be covered with a polymer fabric.
 - a. Basis-of-Design Product: subject to compliance with requirements, provide York Flashing; Multi-Flash SS or a comparable product
 - 1) Illinois Products, Inc.; IPCO Stainless Steel Fabric Flashing
 - 2) Prosoco, Inc.; R-Guard SS ThruWall
 - 3) STS Coatings, Inc.; Wall Guardian Stainless Steel TWF
 - 4) TK Products, Inc.; TK TWF
 2. Flexible Stainless Steel Self-Adhering Flashing: Stainless steel core with polymer fabric laminated to the bottom stainless steel face with non-asphalt adhesive. The top face (exposed side) must not be covered with a polymer fabric.
 - a. Basis-of-Design Product: subject to compliance with requirements, provide York Flashing; York 304 or a comparable product:
 - 1) Illinois Products, Inc.; IPCO Self-Adhesive Stainless Steel
 - 2) STS Coatings, Inc.; Wall Guardian Self Adhering Stainless Steel Flashing
 - 3) TK Products, Inc.; TK Self-Adhering Stainless Steel TWF
 - 4) Vapro Shield, Inc.; VaproThru-Wall Flashing SA
 3. Flexible Stainless Steel Flashing with Drainage Fabric: Stainless steel core with polymer fabric laminated to the bottom stainless steel face with non-asphalt adhesive. The top face (exposed side) must not be covered with a polymer fabric.
 - a. Basis-of-Design Product: subject to compliance with requirements, provide York Flashing; York Flash-Vent SS or a comparable product
 - 1) STS Coatings, Inc.; Wall Guardian Venting Stainless Steel TWF (www.stscoatings.com)
 - 2) Building Materials West Company, Inc.; Evacu-Flash SS (www.evacu-flash.com)
 - 3) Other flashings that meet the requirements
 - b. Cavity drainage material is not needed with this option
- C. Accessories: Use the following unless otherwise indicated:

1. Outside Corner and Inside Corner material; manufacturer's standard available units using 26 gauge stainless steel
2. End dam: Product may be folded in line with the flashing material or utilize preformed end dams by manufacturer using 26 gauge stainless steel
3. Drip Edge: Stainless-Steel sheet Type 304 with hemmed edge
 - a. Basis-of-Design Product: subject to compliance with requirements, provide Hohmann & Barnard; DP Standard Drip Plate or a comparable product
4. Termination Bar: Stainless-steel sheet 0.019 inch by 1-1/2 inches (0.48 mm by 38 mm) with a 3/8 inch (10-mm) sealant flange at top.
 - a. Basis-of-Design Product: subject to compliance with requirements, provide Hohmann & Barnard; T2 Termination Bar or a comparable product
5. Fasteners: Domestic manufactured fastener types and sizes recommended by flashing manufacturer for intended use.
6. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.
 - a. Basis-of-Design Product: subject to compliance with requirements, provide York Flashing; US-100 Sealant or a comparable product
 - b. Splice material: Product standard of quality is York 304 by York Manufacturing, standard self-adhered metal material; material matching system material or use York Manufacturing's Flash Vent Stainless Steel lap piece and polyether sealant as a splice
7. Weep/Vent Products: Use the following unless otherwise indicated:
 - 1) Cellular Plastic Weep/Vent: One-piece, flexible extrusion made from UV-resistant polypropylene copolymer, full height and width of head joint and depth 1/8 inch (3 mm) less than depth of outer wythe, in color selected from manufacturer's standard.
 - a) Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Blok-Lok Limited; Cell-Vent.
 - 2) Dayton Superior Corporation, Dur-O-Wal Division; Cell Vents.
 - 3) Hohmann & Barnard, Inc.; Quadro-Vent.
8. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.
 - c. Configuration: Provide one of the following:
 - 1) Strips, full depth of cavity and 10 inches (250 mm) high, with dovetail shaped notches 7 inches (175 mm) deep that prevent clogging with mortar droppings.
 - d. Manufacturers: Subject to compliance with requirements, provide products by one of the following, but not limited to:

- 1) Hohmann & Barnard
- 2) York Flashing
- 3) Mortar Net Solutions

2.6 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2 Class A Grade 1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene urethane.
 - a. Basis-of-Design Product: subject to compliance with requirements, provide Hohmann & Barnard; NS Closed Cell Neoprene Sponge or a comparable product
- B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805, complying with ASTM D 2287, Type PVC-65406 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.
 - b. Basis-of-Design Product: subject to compliance with requirements, provide Hohmann & Barnard; RS Rubber Control Joint or a comparable product
- C. Backer Rod: Extruded, Closed Cell Polyethylene.

2.7 MORTAR

- A. Mortar shall conform to ASTM C 270 under the guidelines provided in BIA Technical Notes #8 Series.

2.8 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

2.9 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Cleaning Reinforcement:
 1. Remove mud, loose rust, ice and other coatings from reinforcement which would interfere with bond.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

2.10 INSTALLATION

- A. Install in accordance with manufacturer's instructions and approved submittals. Comply with manufacturer's reference standards as listed in this Section.
 1. For molded brick from manufacturer's Cushwa or Rock Ridge plants, comply with TAN: Basic Guide for Installing Molded Brick.

2.11 BONDING

- A. Lay masonry in bond pattern as indicated on drawings or general notes.
 - 1. Reference BIA Technical Note No. 30 for additional requirements.

2.12 LAYING MASONRY

- A. Lay masonry with full head and bed joints.
- B. Lay all brick plumb and true to lines.
- C. Where fresh mortar joins partially set mortar, remove loose brick and mortar, and lightly wet exposed surface of set masonry.
- D. Toothing shall be subject to approval by the Architect/Engineer.
- E. When adjustment is necessary to be made after mortar begins to harden, remove hardened mortar and replace with fresh mortar.

2.13 TOOLING AND POINTING

- A. Joint Profile: Tool mortar joints to a concave appearance.
- B. Joint Profile: Tool mortar joints to a concave V-shaped appearance.
- C. Joint Profile: Tool mortar joints to a concave grapevine appearance.
- D. Tool exposed joints when "thumb-print" hard.
- E. Flush cut all joints not tooled.
- F. When pointing, rake mortar joints to a depth of not less than 1/2 inch (12 mm). Fill solidly with pointing mortar. Tool joints.

2.14 FLASHING

- A. Clean surface of masonry from projections which might puncture flashing.
- B. Place through-wall flashing on bed of mortar.
- C. Cover flashing with mortar.
- D. Lap flashing a minimum of 6 inches (152 mm).
- E. Leave flashing project from face of wall approximately 1/4 inch (6 mm) to form a drip. Flashing shall be cut back to the face of the wall after inspection, if the drip is deemed objectionable by Architect.

2.15 WEEPHOLES

- A. Provide weep holes in head joints of the first brick course immediately above flashing by placing weeps no more than 24 inches (610 mm) on center horizontally.
- B. Keep cavity free from mortar.

2.16 EXPANSION JOINTS

- A. Keep clean from all mortar and debris.
- B. Locate as shown on drawing.

- C. Install neoprene pre-molded foam pad.
- D. Install backer rod.
- E. Install sealant. Prime surfaces if necessary.

2.17 CLEANING

- A. Cut out all defective mortar joints and holes in exposed masonry and provide new mortar.
- B. Clean pre-selected sample wall area. Do not proceed with cleaning until approved by Architect.
- C. Clean brick and mortar as outlined in BIA Technical Notes 20 and in accordance with manufacturer's technical advisory note.
 - 1. Category A - KF SWB and all Surface Treated Brick; Harmar, KF and Lawrenceville Sand Faced Brick; Harmar and KF Tumbled Brick; Cushwa and Rocky Ridge Molded Face Brick: Comply with technical advisory for Cleaning Molded Brickwork. High pressure (over 300 psi) is not allowed. Use Eacochem NMD80 cleaning agent or equal acceptable to the brick manufacturer.
 - 2. Category B - Harmar, KF and Lawrenceville Face Brick (not sanded or coated): Clean with bucket and brush method, high pressure allowed if appropriate precautions used. Use Eacochem NMD80 cleaning agent or equal acceptable to the brick manufacturer.
 - 3. Category C - Cushwa and Rocky Ridge Molded Pavers;; Harmar, KF and Lawrenceville Pavers (not tumbled); Harmar Ashmot and Cheswick Lime Coated Face Brick; KF Nantucket and Chatham Lime Coated Face Brick: No cleaning is recommended.
 - 4. Category D - KF Tumbled Pavers (Canal Street); Harmar Tumbled Pavers (Rural Village): No cleaning is allowed.
- D. All cleaning practices and product used shall be in accordance with cleaning products manufacturer's printed instructions.

END OF SECTION